REMARKS

Claims 1-8 are pending in the application. Claims 1-8 are rejected. All rejections are respectfully traversed.

The invention is a method for reduced spatial resolution transcoding of a compressed bitstream of a sequence of frames of a video signal. Frames of the compressed bitstream are decoded and the decoded frames are stored in a first frame buffer. The decoded frames are down-sampled to a reduced resolution. The reduced resolution frames are stored in a second frame buffer and the reduced resolution frames are partially encoded to produce a reduced resolution compressed bitstream of the video.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Christopoulos et al. (U.S. Patent 6,526,099).

In claims 1 and 8, the invention ***partially*** encodes reduced resolution frames to produce a reduced resolution compressed bitstream. Christopoulos ***fully*** encodes reduced resolution frames to produce a reduced resolution bitstream, see col. 7, lines 41-44, below:

> coefficients. The following part of the encoder of the transcoder consists of a complete coder except for that the DCT is now applied in blocks of dimension 4×4 instead of 8×8. The receiver has to use a decoder that also operates in

So according to Christopoulos, "the transcoder consists of a complete coder." The only difference is the dimensions of the blocks to be encoded. Therefore, Christopoulos fully encodes reduced resolution frames. Claimed is ***partially***

encoding the reduced resolution frames to produce a reduced resolution compressed bitstream of the video. Christopoulos can never anticipate what is claimed.

In claim 2, the decoding further comprises variable length decoding of the bitstream to yield an output comprising full-resolution motion vectors and quantized DCT coefficients for each block in each frame; inverse quantizing the quantized DCT coefficients for each block in each frame; applying an inverse DCT to the inverse quantized blocks of the frames; and motion compensating with full resolution motion vectors of the stored decoded frames. In claim 4, the motion compensating during the decoding further comprises adding a full resolution motion compensated prediction of a previous decoded frame to the current frame. As stated above, claimed is a full decoding of a compressed bitstream and a partial encoding of reduced resolution frames of the bitstream. Christopolous teaches a full decoding and full encoding. That can never anticipate what is claimed.

In claim 3, the partial encoding further comprises motion compensating with reduced resolution motion vectors of the stored reduced resolution frames; applying a DCT to the motion compensated difference of the reduced resolution frames; quantizing DCT blocks of the frames; and variable length coding the quantized blocks of the frames. At col. 7, lines 1-10, Christopoulos describes encoding reduced resolution frames using ***full resolution*** motion vectors stored in the previous frame store 119, which contains the fully decoded, full resolution frames, see col. 7, lines 1-10, below:

used for the motion estimation/compensation part. The motion estimation in block **120** searches a previous frame store **119** for an offset block of pixels that closely resembles the current block. The motion vectors of this best-match block are calculated in the block **120** and fed to the motion compensation block **122**. The output from the block **122** is

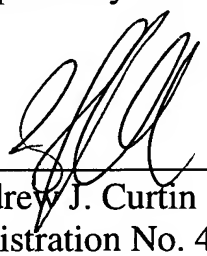
Fully encoding reduced resolution frames using full resolution motion vectors as in Christopoulos can never anticipate partially encoding reduced resolution frames using reduced resolution motion vectors as claimed. Therefore, the rejection should be reconsidered and withdrawn.

In claim 5, the motion compensating during the partial encoding further comprises subtracting a reduced resolution motion compensated prediction of a previous reduced resolution frame from the current reduced resolution frame. As stated above with respect to claim 3, Christopoulos fully encodes reduced resolution frames using full resolution motion vectors, which can never anticipate partially encoding reduced resolution frames using reduced resolution motion vectors as claimed. The same is true for claim 6, where the reduced resolution motion vectors are estimated from the reduced resolution frames. Christopoulos uses full resolution motion vectors from a previous fully decoded, full resolution frame.

Claim 7 recites mapping the full-resolution motion vectors to the reduced resolution motion vectors from the variable length decoded frames. Nothing in columns 6-7 of Christopoulos describes mapping full-resolution motion vectors to the reduced resolution motion vectors, as claimed. The Examiner is requested to point out exancly which words mean "mapping full-resolution motion vectors to the reduced resolution motion vectors."

All rejections have been complied with, and applicant respectfully submits that the application is now in condition for allowance. The applicant urges the Examiner to contact the applicant's attorney at the phone and address indicated below if assistance is required to move the present application to allowance. Please charge any shortages in fees in connection with this filing to Deposit Account 50-0749.

Respectfully submitted,



Andrew J. Curtin
Registration No. 48,485

Mitsubishi Electric Research Laboratories, Inc.
201 Broadway, 8th Floor
Cambridge, MA 02139
Telephone: (617) 621-7573
Facsimile: (617) 621-7550